U.S. Environmental Protection Agency
Office of Compliance and Enforcement
1200 Pennsylvania Avenue, NW
Washington, DC 20460

U.S. Environmental Protection Agency, Region 10
Office of Compliance and Enforcement
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) COMPLIANCE INSPECTION

CITY OF TACOMA, WASHINGTON

FINAL INSPECTION REPORT

Inspection Dates:
May 17–18, 2012

Report Date:
November 1, 2012

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Section 1.0 Introduction

On May 17–18, 2012, the U.S. Environmental Protection Agency (EPA), Region 10 and an EPA contractor, PG Environmental, LLC (hereinafter, collectively, the EPA Inspection Team) conducted an inspection of the Municipal Separate Storm Sewer System (MS4) Program of the City of Tacoma, Washington. Discharges from the City of Tacoma MS4 are regulated under the *Phase I Municipal Stormwater Permit – National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for Discharges from Large and Medium Municipal Separate Storm Sewer Systems* (hereinafter, the Permit; see Appendix A), issued by the State of Washington Department of Ecology (Ecology) and effective February 16, 2007. The City of Tacoma (hereinafter, the City) maintains coverage under Permittee Coverage No. WAR04-4003. Permit modifications became effective on June 17, 2009 and September 1, 2010. The Permit expired on February 15, 2012, and on August 1, 2012 Ecology reissued the Permit, with limited changes, effective September 1, 2012 through July 31, 2013. The City initially received coverage under NPDES municipal stormwater permits issued by Ecology in 1995.

The Permit authorizes the City of Tacoma (the Permittee) to discharge stormwater and certain non-stormwater flows to surface waters and to groundwaters of the state from the MS4 owned or operated by the City in the permitted area (defined as areas covered by the Phase I Municipal Stormwater Permit), under the Permit terms and conditions. Section S5.A of the Permit requires the City of Tacoma to implement a Stormwater Management Program (SWMP). The City of Tacoma's Surface Water Assistant Division Manager confirmed that the City of Tacoma is currently operating under the 2010 Stormwater Management Program, dated March 2010 (hereinafter, City's 2010 SWMP; see Appendix B).

Tacoma is a port city on the Puget Sound and is located about 32 miles southwest of Seattle. According to City staff, the permitted area encompasses approximately 50 acres and has a population of 200,000 people. City staff also indicated that the City's MS4 consists of about 578 miles of storm drain pipe, four stormwater pump stations, 11,000 manholes, 22,500 catch basins, and 446 outfalls which discharge to local waterways and eventually enter Puget Sound. The City has delineated its MS4 into the following sub-basins: Western Slopes, Flett Creek, Thea Foss Waterway, Joe's Creek, Leach Creek, Lower Puyallup River, North Tacoma, Northeast Tacoma, and the Tideflats.

With respect to the Permit, the City of Tacoma organization consists of two divisions within the Public Works Department; each has a primary role in implementing the stormwater program. These divisions include the Environmental Services - Science and Engineering (ESSE) Division and the Engineering Division. Within these divisions, the following sections have significant roles in the stormwater program: Surface Water (SW), Environmental Compliance, and Maintenance within the ESSE Division; and Streets Operation and Maintenance Section within the Engineering Division. Although each of these organizational divisions is assigned responsibilities associated with the SWMP, the SW Section has overall responsibility for managing the stormwater program.

The EPA MS4 program compliance inspection evaluated facilities, activities, and projects in the City. The inspection focused on the following four SWMP components described in Section S.5 of the Permit:

- Controlling runoff from new development and redevelopment.
- Source control program for existing development.
- Illicit connections and illicit discharges detection and elimination (IC/IDDE).
- Operation and maintenance program.

The EPA Inspection Team did not observe deficiencies regarding the following City programs during the inspection: controlling runoff from new development and redevelopment; the source control program for existing development; or the IC/IDDE Program. Therefore, no further discussion of these SWMP components is included in this report.

The purpose of the inspection was to obtain information that will assist EPA in assessing the City of Tacoma's compliance with the requirements of the Permit and associated SWMP, as well as the implementation status of the current MS4 program. The inspection schedule is presented as Appendix C.

The EPA Inspection Team obtained information through interviews with representatives from the City's Public Works Department and various contractors, along with a series of site visits, record reviews, and field verification activities within the City of Tacoma. The office session was held to obtain information regarding overall program management, program evaluation, and oversight. In addition, the EPA Inspection Team held a closing conference at the City of Tacoma offices on May 18, 2012, with representatives from the respective organizational divisions attending.

The primary representatives involved in the inspection were the following:

City of Tacoma MS4 Program Compliance Inspection: May 17–18, 2012	
City of Tacoma – Public Works Department, Surface Water	Lorna Mauren, SW Assistant Division Manager Dana deLeon, Professional Engineer Jessica Knickerbocker, Engineer

City of Tacoma MS4 Program Compliance Inspection: May 17–18, 2012	
City of Tacoma – Public Works Department, Environmental Compliance	Michael Kennedy, Assistant Division Manager Kurt Fremont, Senior Environmental Specialist Jim Oberlander, Senior Environmental Specialist Chris Ott, Senior Environmental Specialist Tony Miller, Environmental Specialist Brett Burrows, Senior Source Control Representative Alan Aplin, Senior Environmental Specialist Rick Norberg, Senior Source Control Representative Larry Dunn, Source Control Representative
City of Tacoma – Public Works Department, Sewer Transmission and Maintenance	Kerry James, Coordinator Steven Jackson, Coordinator
City of Tacoma – Public Works Department, Street Operations	Matt Fengler, Assistant Division Manager Joe Hagala, Work Management Supervisor
City of Tacoma – Public Works, Maintenance	Madeline Malmgren, Assistant Division Manager
City of Tacoma – Public Works, Private Development	James Coffman, Assistant Division Manager
City of Tacoma Public Works	Mike Slevin, Assistant Public Works Director, Environmental Services John O'Loughlin, ESSE Division Manager Kenneth Tross, Division Manager, Environmental Services Maintenance Division Ray Bailey, Division Manager, Operations and Maintenance Division
Washington State Department of Ecology Representatives	Deb Cornett, Unit Supervisor, Water Quality Vince McGowan, MS4 Permit Manager, Water Quality Rachel McCrea, MS4 Permit Manager, Water Quality

City of Tacoma MS4 Program Compliance Inspection: May 17–18, 2012	
EPA Representatives	Joe Roberto, EPA Region 10, Puget Sound Enforcement Coordinator Jon Klemesrud, EPA Region 10, MS4 Inspector
EPA Contractors	Scott Coulson, PG Environmental, LLC Marleina Overton, PG Environmental, LLC

Section 2.0 Information Obtained Regarding Compliance with the Permit

Prior to the inspection, the EPA Inspection Team formally requested that the City provide specific documentation for review by the team and have specific documentation available for review at the time of the inspection. The EPA Inspection Team provided the City of Tacoma with a written list of requested records on April 3, 2012 (hereinafter, EPA Records Request; see Appendix D, Exhibit 1). In response, on May 4, 2012, the City of Tacoma provided the EPA Inspection Team with a compact disk (CD) including electronic copies of the initial documents requested. In addition, the City of Tacoma made additional documents available during the inspection and provided a revised CD containing the spreadsheet and associated documents. The complete spreadsheet and associated documents are hereinafter referred to as the City of Tacoma Response Inventory, which is presented as Appendix D, Exhibit 2. The EPA Records Request and City of Tacoma Response Inventory are referenced, as applicable, throughout this inspection report.

During the inspection, the EPA Inspection Team obtained documentation and other supporting evidence regarding compliance with the Permit and implementation of the City's 2010 SWMP. The presentation of inspection observations in this report does not constitute a formal compliance determination or notice of violation; rather, it identifies potential Permit non-compliance and program deficiencies. Program deficiencies are areas of concern for successful program implementation. All referenced documentation used as supporting evidence is provided in Appendix D, the Exhibit Log; photo documentation is provided in Appendix E, the Photograph Log.

During the inspection, the EPA Inspection Team identified several elements of the City of Tacoma MS4 program that were noteworthy, including the following:

1. The City's Source Control Program is based on its experiences with the Thea Foss Waterway Superfund Cleanup. The cleanup effort was completed in 2006 and included investigating the sources and extent of the contaminants in the Thea Foss Waterway, conducting extensive chemical and biological testing, developing a cleanup plan, dredging or capping contaminated sediment, and conducting habitat restoration. In order to prevent recontamination, the City now employs a combination of source control (i.e., addressing industrial, commercial, and multifamily properties) and "enhanced" storm drain system maintenance.

   "Enhanced" storm drain system maintenance consists of the use of sewer cleaning trucks to inject high pressure water moving slowly through the system to dislodge sediment and debris, that is then vacuumed out and removed. The discharge for the area of maintenance is plugged to prevent the escape of any maintenance water to the surrounding waterway. The City conducts analysis and disposes of removed solids at a landfill, and conveys removed maintenance liquids to a storage/settling tank for analysis and ultimate treatment at one of the City's two wastewater treatment facilities. The City's Assistant Maintenance Division

Manager explained that enhanced storm drain system maintenance had proven to be a cost effective means of recovering sediment.

2. The City of Tacoma prepared a presentation showing the results of monitoring seven outfalls for select parameters in the Thea Foss Waterway. The monitoring results indicate a tangible improvement in water quality including reductions in concentrations of solids, metals, polycyclic aromatic hydrocarbons (PAHs), and phthalates (see Appendix D, Exhibit 3). When water quality problems persist despite source control and enhanced storm drain system cleaning, the City implements structural treatment control projects (i.e., capital improvement projects) as part of its overall pollutant reduction strategy.
3. The City had a strong reliance on a combination of advanced technologies in an effort to maintain records that demonstrate Permit compliance and enable the City to measure program effectiveness. The following programs and systems are examples of technologies used by the City:
    - Asset Management Program – Used to identify and track assets and conduct maintenance activities focused on critical need. This program uses and coordinates with a number of the technologies described below.
    - Storm Rapid Assessment Program (STRAP) – Inspection program using hydraulically powered video cameras in the stormwater pipes, providing a proactive mechanism to identify needed repairs and prevent costly emergency repairs.
    - Zonar Maps – Electronic vehicle tracking system using global positioning system (GPS) technology to track maintenance activities performed (e.g., street sweeping) or identify maintenance needs.
    - SAP – Computerized maintenance management information system used to track training and maintenance documents, and to provide notifications for assigned maintenance orders.
    - Geographic Information System (GIS) – Geographical database used to track facilities and stormwater features owned and maintained by the City.
    - Government Made Easy (govME) – Web site providing records, drawings, permitting, and GIS mapping information.
4. The City used a resourceful approach in developing stormwater pollution prevention plans (SWPPPs) for City facilities. Successful SWPPP implementation relies on direct, hands-on collaboration with facility staff to instill ownership of the SWPPP and ensure its full deployment. The City's approach included the following:
    - Writing the SWPPPs in a non-technical manner for easy interpretation by field and maintenance staff.
    - Providing opportunities for City staff to assist in the development of Best Management Practices (BMPs) and solutions to be incorporated in the SWPPPs that are applicable to the individual facility.

- Encouraging City staff to review the SWPPPs and provide comments.

Table 1 provides a summary of the EPA Inspection Team's overall inspection observations. Descriptions and details regarding the inspection observations, as well as supporting documentation, are provided in the applicable sections of this MS4 inspection report.

Table 1. Requirements of the Permit (WAR04-4003) and potential non-compliance/program deficiencies identified by the EPA Inspection Team

Program Elements and Permit Requirements	Potential Non-compliance/ Program Deficiency
Operation and maintenance program Section S5.C.9 of the City's 2010 SWMP includes Permit Compliance Measures for complying with various components of Section S5.C.9 of the Permit. See Sections 2.1.1, 2.1.2, and 2.1.3 of the inspection report for the specific SWMP and Permit references for each program deficiency or item of potential non-compliance.	1. Concerns pertaining to improper pollution prevention practices and SWPPP implementation were noted during site visits at City facilities (Section 2.1.1). 2. SWPPPs for the City's Water Distribution Operations Center, Dock Street Yard, and Upper Yard Storage Garage were deficient (Section 2.1.2). 3. The City of Tacoma could improve its training program for employees who have operation and maintenance job functions (Section 2.1.3). See the referenced section of the inspection report for further discussion of these issues.

Section 2.1 Operation and Maintenance Program

Section S5.C.9.a of the Permit requires the City's SWMP to include a program to regulate maintenance activities and conduct maintenance activities that prevent or reduce stormwater impacts. Pursuant to the Permit, Section S5.C.9 of the City's 2010 SWMP outlines Permit Compliance Measures to implement SWPPPs for City maintenance facilities.

On May 17-18, 2012, the EPA Inspection Team conducted site visits at three facilities owned and/or operated by the City of Tacoma. The primary purpose of the visits was to observe the City's process for developing and implementing SWPPPs at its facilities. Summary observations pertaining to the facilities are presented below due to their direct relevance to the City's obligations under its MS4 permit.

2.1.1. Concerns pertaining to improper pollution prevention practices and SWPPP implementation were noted during site visits at City facilities.

Section S5.C.9.b.ix of the Permit requires the City to develop and implement a SWPPP for all heavy equipment maintenance or storage yards and material storage facilities owned or operated in the area subject to the MS4 Permit that are not required to have coverage under the *General NPDES Permit for Stormwater Discharges Associated with Industrial Activities* or another NPDES permit that covers stormwater discharges associated with the activity. In other words, SWPPP development and implementation is required for all heavy equipment maintenance or storage yards and material storage facilities that are covered under the MS4 Permit.

The EPA Inspection Team visited the Water Distribution Operations Center, the Dock Street Yard, and the Upper Yard Storage Garage, all of which are owned and operated by the City. SWPPPs had been developed for these three facilities, and should therefore be fully implemented.

The SWPPPs were available for review during the site visits (see Appendix D, Exhibits 4, 5, and 6). All referenced photographs are contained in Appendix E, Photograph Log.

Water Distribution Operations Center – 3506 South 35th Street, Tacoma, Washington

The Water Distribution Operations Center is used by Tacoma Public Utilities to maintain and operate the City's potable water infrastructure. The facility has various functions including (1) vehicle and equipment storage, (2) vehicle and equipment washing, (3) satellite hazardous material storage, (4) pipe storage, (5) scrap material storage, and (6) other material storage (e.g., sand, gravel, asphalt cold mix, rock, etc.). During the site visit, the EPA Inspection Team reviewed the SWPPP and made comparisons between the SWPPP requirements and site conditions.

The EPA Inspection Team observed the following with regard to pollution prevention and good housekeeping at the Water Distribution Operations Center:

1. Sediment accumulation was observed in the pipe storage area and adjacent to a trash bin on the south side of the site (see Appendix E, Photographs 1, 2, and 3). In accordance with Section 3.1 of the SWPPP, "paved surfaces must be swept regularly" and "in areas where a sweeper cannot get to, hand sweeping should be performed often enough to prevent accumulation of dust, dirt, or debris." While inserts to capture sediment had been installed in the drop inlets near the pipe storage area and the trash bin (see Appendix E, Photographs 4 and 5), good housekeeping and pollution prevention measures should be implemented in accordance with the SWPPP to prevent sediment from entering the storm sewer system.
2. Diesel fuel residue was observed on the pavement under a mobile generator parked in the equipment storage area on the northwest side of the site, and around the fueling nozzle of the generator (see Appendix E, Photographs 6 and 7). Section 3.1 of the SWPPP states, "Do not top off fuel tanks when filling; spills can occur when fuel expands due to sunlight exposure" and, "Clean up leaks and spills immediately and report them to your supervisor." Furthermore, Section 4.0 of the SWPPP identifies *BMP A204 - Mobile Fueling of Vehicles and Heavy Equipment* as a Source Control BMP to be implemented at the facility, and Appendix C of the SWPPP includes the full text of BMP A204 which reiterates not overfilling tanks and allowing for heat expansion during warm weather. It should be noted that facility representatives applied absorbent material on the diesel fuel residue underneath the generator during the inspection (see Appendix E, Photograph 8). Good housekeeping and pollution prevention measures should be adhered to and BMP implementation should be conducted in accordance with the SWPPP to prevent/address spills from fueling operations.
3. A facility staff member was observed washing a stop sign on the east side of the Fleet Services Shop (see Appendix E, Photographs 9 and 10), not within the dedicated wash pad on the southwest side of the building (see Appendix E, Photograph 11). Section 4.0 of the SWPPP identifies *BMP A101 – Cleaning or Washing of Tools, Engines, and Manufacturing Equipment* as a Source Control BMP to be implemented at the facility. Specifically, the SWPPP states, "Cleaning and pressure washing of engines, equipment, and portable objects is allowed at the Fleet Services Shop. Use the dedicated wash pad at the southwest end of the shop and make sure no water discharges outside the covered containment area." Furthermore, Appendix C of the SWPPP includes the full text of BMP A101 including a pollutant control approach and required BMPs. The list of required BMPs includes educating employees to control washing operations and requiring washwater to be discharge to a holding tank, process treatment system, or sanitary sewer, never to the storm drain. It should be noted that the dedicated wash pad was not covered as stated in the SWPPP; however, according to the facility representatives and the SWPPP, the wash pad does drain to an oil/water separator that discharges to the City's sanitary sewer system. In accordance with the SWPPP, washing activities should occur in the dedicated wash area and BMPs must be implemented to prevent wash water from entering the storm sewer system.

4. Corroding scrap metal was stored directly on the pavement on the south side of the facility (see Appendix E, Photograph 12). In accordance with Section 3.1 of the SWPPP, all materials, supplies, spare parts, and small equipment shall be stored on pallets or shelving, where possible, to prevent contact with surface water. Furthermore, the SWPPP requires anything that could produce an oily sheen or that could release contaminants must also be repaired, covered or otherwise protected from contact with rain and/or snow. Proper storage of scrap materials, including storing on shelving or pallets and covering the materials, should be implemented to prevent the contribution of pollutants to stormwater.
5. Active oil leaks and staining were observed in the vehicle parking area adjacent to the loading docks (see Appendix E, Photographs 13, 14, and 15). Section 3.1 of the SWPPP includes the following statements:
    a. "Visually inspect all vehicles and equipment for oil leaks before starting the engine."
    b. "Clean up all leaks and spills immediately and report them to your supervisor."
    c. "City of Tacoma vehicles should not be leaking fluids, for any reason, at any time. Fix all leaks promptly."

    Furthermore, the SWPPP requires the use of drip pans, absorbent pads, floor dry, Absorbal®, or similar products to capture small drips. Improved BMP implementation is needed to address leaks from vehicles and equipment parked at the facility.
6. Material stockpiles including rock, sand, and other aggregates were stored outside without full coverage or containment BMPs (see Appendix E, Photographs 16 and 17). Although the EPA Inspection Team did not observe material leading from the stockpiles on the pavement directly adjacent to the storage areas, sediment accumulation was observed in other areas on site as shown in Photographs 1, 2, and 3 of Appendix E. Section 4.0 of the SWPPP identifies *BMP A201 – Loading and Unloading Areas for Liquid or Solid Material* as a Source Control BMP to be implemented at the facility. Specifically, the SWPPP states, "Material stockpiles such as crushed rock, scrap wood, tires or pole butts must be stored so that no trash, sediment or petroleum products discharge into the storm drainage system." Furthermore, Appendix C of the SWPPP includes the full text of BMP A201 including a pollutant control approach and required BMPs at all loading/unloading areas. The required BMPs section states, "Berm, dike, and /or slope the loading/unloading area to prevent run-on of stormwater and to prevent the runoff or loss of any spilled material from the area." Additional BMPs may be needed in the material storage areas to prevent pollutants from entering the storm drainage system.

Dock Street Yard – 202 East 23rd Street, Tacoma, Washington

The Dock Street Yard is a waste storage and disposal facility used by the Sewer Transmission and Maintenance Division. The facility has various functions including (1) sanitary sewer debris storage, (2) street sweeping waste storage, (3) vehicle and

equipment storage, (4) vehicle washing, (5) sewer equipment storage, (6) "hot" or contaminated load storage, and (7) other material storage (e.g., sand, rock, etc.).

The EPA Inspection Team conducted two site visits to the Dock Street Yard on May 17 and 18, 2012. During the site visit on May 17, the EPA Inspection Team reviewed the SWPPP and made comparisons between the SWPPP requirements and site conditions.

The EPA Inspection Team observed the following with regard to pollution prevention and good housekeeping at the Dock Street Yard:

1. Oil staining was observed in the vehicle and equipment parking areas at the facility (see Appendix E, Photographs 18 and 19). The oil staining shown in Photograph 18 was upgradient of a drop inlet that drained to a 72-inch storm drain pipe and eventually discharges to the Thea Foss Waterway. The heavy equipment shown in Photograph 19 was parked inside a covered area, not exposed to stormwater; however, the EPA Inspection Team did not observe any attempt to absorb or otherwise cleanup the oil stain. Section 3.1 of the SWPPP includes the following statements:
    a. "Visually inspect all vehicles and equipment for oil leaks before starting the engine."
    b. "Clean up all leaks and spills immediately and report them to your supervisor."
    c. "City of Tacoma vehicles should not be leaking fluids, for any reason, at any time. Fix all leaks promptly."

    Furthermore, the SWPPP requires the use of drip pans, absorbent pads, Absorbal®, or similar products to capture small drips. Improved BMP implementation is needed to address leaks from vehicles and equipment parked at the facility to prevent pollutants from entering the storm drainage system.
2. A dedicated vehicle wash pad was located in the northwest corner of the facility (see Appendix E, Photograph 20). The drop inlet shown in Photograph 18 was located east of the wash pad and a flow pathway was observed leading from the wash pad towards the drop inlet. The EPA Inspection Team did not observe any vehicles or equipment washing during the inspection; therefore, the team was unable to determine if discharges from the wash area would occur during washing activities. The EPA Inspection Team recommends that the City of Tacoma review washing activities at the dedicated wash pad to ensure wash water does not drain to the storm drainage system.

It should be noted that during the site visit on May 17, 2012 the City of Tacoma representatives could not confirm which drop inlets drained to the storm drainage system and a SWPPP site map or drainage schematic was not available. On May 18, 2012, the EPA Inspection Team conducted another site visit to the Dock Street Yard to observe the City of Tacoma conduct smoke and dye testing to confirm which drop inlets were connected to the storm drainage system (see Appendix E, Photographs 21 and 22). The City of Tacoma staff confirmed that four drop inlets drain to the storm drainage system

and used this information to update the SWPPP and create a site map showing the location of each of the four drop inlets.

Upper Yard Storage Garage – 2335 Jefferson Avenue, Tacoma, Washington

The Upper Yard Storage Garage is a storage yard used by the Streets and Grounds Maintenance Division. The facility has various functions including (1) vehicle and equipment storage, (2) salt storage, (3) pesticide/herbicide storage, (4) street waste storage, (5) green waste storage, and (6) other material storage (e.g., sand, soil, etc.).

During the site visit, the EPA Inspection Team reviewed the SWPPP and made comparisons between the SWPPP requirements and site conditions.

Overall, the EPA Inspection Team observed effective housekeeping and pollution prevention practices at the Upper Yard Storage Garage. However, inadequate BMPs were observed in the salt storage area. The salt stockpiles were stored inside a canopy structure with concrete barriers separating the stockpiles of ice slicer, roadway salt, and salt/sand mix (see Appendix E, Photograph 23). One side of the storage area was open and exposed to weather while the back side of the storage area was adjacent to a retaining wall. White salt residue was observed on the asphalt roadway and migrating from the stockpiles (see Appendix E, Photographs 24 through 28). The City of Tacoma representatives told the EPA Inspection Team that groundwater infiltrated through the retaining wall on the back side of the storage area, creating run-on conditions in the stockpiles. Appendix C of the SWPPP includes a pollutant control approach and BMPs as part of *BMP A401 - BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-products, or Finished Products.* Specifically, the pollutant control approach includes impervious containment with berms, dikes, etc. and/ or cover to prevent run-on and discharge of leachate, pollutant(s) and total suspended solids (TSS). While a canopy cover was provided in the stockpile area, additional source control BMPs are needed to prevent run-on conditions.

2.1.2. SWPPPs for the City's Water Distribution Operations Center, Dock Street Yard, and Upper Yard Storage Garage were deficient.

Section S5.C.9.b.ix of the Permit requires the development and implementation of SWPPPs for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to the Permit that are not required to have coverage under other NPDES permits. Furthermore, Section S5.C.9 of the City's 2010 SWMP outlines Permit Compliance Measures to implement SWPPPs for City maintenance facilities. During site visits to the Water Distribution Operations Center, Dock Street Yard, and Upper Yard Storage Garage on May 17-18, 2012, inadequacies were identified in the respective SWPPPs; therefore, specific observations for these facilities are discussed below.

Water Distribution Operations Center – 3506 South 35th Street, Tacoma, Washington

During the site visit of the Water Distribution Operations Center, the EPA Inspection Team reviewed the SWPPP. According to Section 2.2 of the SWPPP, the site map identifies stormwater drainage areas and discharge points as well as specific activities that could impact stormwater quality (see Appendix D, Exhibit 4). In contrast to this requirement, the site map provided during the inspection did not identify the stormwater drainage areas, two drop inlets connected to the underground stormwater drainage system, or specific activities that could impact stormwater quality. Section S5.C.9.b.ix of the Permit requires SWPPP development and implementation; therefore, the City must develop the site map to include the components listed in Section 2.2 of the SWPPP.

Dock Street Yard – 202 East 23rd Street, Tacoma, Washington

A description of the Dock Street Yard is included above in Section 2.2.1 of this report. The EPA Inspection Team reviewed the SWPPP (see Appendix D, Exhibit 5) during the site inspection, and the following inadequacies were observed:

1. **The SWPPP did not include a site map.** According to Section 2.2 of the SWPPP, the site map identifies stormwater drainage areas and discharge points as well as specific activities that could impact stormwater quality. In contrast to this requirement, during the site visit on May 17, 2012 to the Dock Street Yard, a site map was not available for review by the EPA Inspection Team and the City was not able to confirm which drop inlets were connected to the stormwater drainage system. City representatives stated that site maps had not been developed for all facilities required to have SWPPPs. As discussed in Section 2.2.1, the EPA Inspection Team conducted another site visit on May 18, 2012 to observe smoke and dye testing to identify which drop inlets were connected to the stormwater drainage system. The City used this information to update the SWPPP and create a site map showing the location of each of the four drop inlets, and site activities that could impact stormwater quality; however, the stormwater drainage areas must also be included in accordance with Section 2.2 of the SWPPP.
2. **Site inspection records were not maintained in the SWPPP.** In accordance with Section 3.4 of the SWPPP, regular site inspections are required to be conducted at least once a month or more often if necessary. During the site visit, documentation of site inspections were not included in the SWPPP and were not provided to the EPA Inspection Team.

Upper Yard Storage Garage – 2335 Jefferson Avenue, Tacoma, Washington

According to Section 2.2 of the SWPPP, the site map identifies stormwater drainage areas and discharge points as well as specific activities that could impact stormwater quality (see Appendix D, Exhibit 6). In contrast to this requirement, during the site visit on May 18, 2012 to the Upper Yard Storage Garage, a site map was not available for review by the EPA Inspection Team. Section S5.C.9.b.ix of the Permit requires SWPPP development and implementation; therefore, the City must develop the site map to include the components listed in Section 2.2 of the SWPPP.

2.1.3. The City of Tacoma could improve its training program for employees who have operation or maintenance job functions.

Section S5.C.9.b.viii of the Permit requires the City to develop and implement an ongoing training program for employees who have primary construction, operations or maintenance job functions that could impact stormwater quality.

Pursuant to this requirement, the "Ongoing Training Program" section of the City's 2010 SWMP states, "Each individual department will be responsible for implementing a training program…to train City staff with primary construction, operations, and maintenance job functions that may impact stormwater quality." The section further states, "Additional training will be provided based on facility SWPPPs, if applicable" and, "The training program will include regularly scheduled follow-up training and will be documented to maintain a list of trained staff in SAP, the City's Information Management System database."

The City provided multiple examples of training materials and attendance rosters to the EPA Inspection Team, but did not maintain a comprehensive list of departments/divisions and employees that had received the various trainings. City of Tacoma Surface Water staff explained that attempts have been made to coordinate with human resources, to improve the training database, and to track training by using employee ID login that would enable employees to view a training video. It should be noted that during site visits to the Water Distribution Operations Center, the Dock Street Yard, and the Upper Yard Storage Garage, facility representatives stated that records of training were maintained in SAP. The City did provide records of training for the Upper Yard Storage Garage as part of the City of Tacoma Response Inventory (see Appendix D, Exhibit 7); however, the City was not able to provide examples of similar training for the Water Distribution Operations Center or the Dock Street Yard.

In summary, the City of Tacoma could improve its training by developing a more structured program for operations and maintenance training activities and associated tracking. Specifically, the program should include established schedules and frequencies for training activities, continued identification of staff or positions that require training, procedures for documenting and tracking training activities, and effectiveness measures for assessing the implementation of the training program.